

**ABSTRACT OF THE DISCLOSURE**

This invention discloses a method for printed circuit board (PCB) inspection, including providing a multiplicity of PCBs placed on an inspection panel, defining each non-identical PCB in terms of geometry and features which are to be inspected, grouping  
5 the PCBs into at least one cluster, the at least one cluster being defined in terms of an amount, location and orientation of the PCBs in the at least one cluster, creating a reference image for the panel defined by a location and orientation of the at least one cluster on the panel and inspecting the panel by comparing sensed information with the reference image.

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